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FORM PTO-1390
(REV 10-2000)

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTORNEY'S DOCKET NUMBER

148/291

TRANSMITTAL LETTER TO THE UNITED STATES
DESIGNATED/ELECTED OFFICE (DO/EO/US)
CONCERNING A FILING UNDER 35 U.S.C. 371

U.S. APPLICATION NO. (If known, see 37 CFR 1.5)

10/049256

INTERNATIONAL APPLICATION NO.
PCT/GB99/02439INTERNATIONAL FILING DATE
August 9, 1999PRIORITY DATE CLAIMED
August 9, 1999TITLE OF INVENTION
FINGER PROTECTOR DEVICEAPPLICANT(S) FOR DO/EO/US
GARVEY, Frank Joseph

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
 2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
 3. ☒ This is an express request to promptly begin national examination procedures (35 U.S.C. 371(f)).
 4. ☒ The US has been elected by the expiration of 19 months from the priority date (PCT Article 31).
 5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
 - a. ☐ is attached hereto (required only if not communicated by the International Bureau).
 - b. ☒ has been communicated by the International Bureau.
 - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
 6. ☐ An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).
 7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
 - a. ☐ are attached hereto (required only if not communicated by the International Bureau).
 - b. ☐ have been communicated by the International Bureau.
 - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
 - d. ☒ have not been made and will not be made.
 8. ☐ An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
 9. ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
 10. ☐ An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).
- Items 11 to 16 below concern document(s) or information included:**
11. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
 12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
 13. ☒ A **FIRST** preliminary amendment.
☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
 14. ☐ A substitute specification.
 15. ☐ A change of power of attorney and/or address letter.
 16. ☒ Other items or information:

An English language copy of the International Search Report prepared by the European Patent Office
An Application Data Sheet

THE BIBLE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: GARVEY
INTERNATIONAL APPLICATION NO.: PCT/GB99/02439
INTERNATIONAL FILING DATE: August 9, 1999
FOR: FINGER PROTECTOR DEVICE

BOX PCT

Assistant Commissioner for Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Sir:

After the assignment of a serial number and prior to the initial examination of the above-identified application, please make the following amendments:

IN THE SPECIFICATION:

Amend the specification by inserting before the first line on page 1:

--This application is a national stage application, according to Chapter II of the Patent Cooperation Treaty. This application claims the priority date of August 9, 1999 for International Patent Application No. PCT/GB99/02439.--

IN THE CLAIMS:

Please cancel claims 1-13 and enter new claims 14 -25, as follows:

- - 14. A finger protector device comprising first, second and third members, the second member being connected between the first and third members by flexible means, the first member is arranged, in use, to be mounted to a first surface and the third

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member is arranged, in use, to be mounted to a second surface, in which relative movement of the first and second surfaces is possible.

15. A finger protector device according to claim 14, in which the flexible means provides a pivotal connection.
16. A finger protector device according to claim 14, in which the relative movement of the first and second surfaces creates or close a gap between the surfaces.
17. A finger protector device according to claim 14, in which the first surface is a door.
18. A finger protector device according to claim 14, in which the second surface is a door frame.
19. A finger protector device according to claim 14, in which the first, second and third members are elongate members.
20. A finger protector device according to claim 14, in which the first member has a mounting portion connected thereto and is connected by flexible means.
21. A finger protector device according to claim 14, in which the third member has a mounting portion connected thereto and is connected by flexible means.

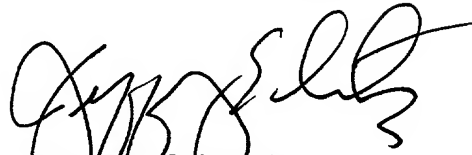
22. A finger protector device according to claim 20 or claim 21, in which the or each mounting portion or portions is or are thicker than the first, second and third members.
23. A finger protector device according to claim 20 or claim 21, in which the or each mounting portion or portions is attached to a member by a flexible plastics joint which is pre-biased at about 90° relative to the member to which it or they is or are attached.
24. A finger protector device according to claim 20 or claim 21, in which the first and second surfaces may have slots mounted thereto in order to engage the mounting portions of the first and third faces respectively.
25. A finger protector device according to claim 20 or claim 21, in which the door frame is connected to a first mounting portion which is pivotally connected to the first member which is pivotally connected to the second member which is pivotally connected to a third member which is pivotally connected to a second mounting portion which is connected to a door, in which the first, second and third members and the first and second mounting portions are all elongate members, and in which the finger protector device has a substantially uniform cross-section along its length.- -

REMARKS

Pursuant to 37 C.F.R. §1.121(c)(ii), a marked-up copy of the claim amendments is included with this Preliminary Amendment and labeled as "Exhibit A". It is believed that

this application is now in condition for allowance. Such action at an early date is respectfully requested.

Respectfully submitted,



Jeffrey J. Schwartz
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EXHIBIT A

AMENDED CLAIMS - MARKED-UP COPY
(U.S. National Phase of International Application No. PCT/GB99/02439)

Please cancel claims 1-13.

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JC10 Rec'd PCT/PTO 08 FEB 2002

21 PRTS

FINGER PROTECTOR DEVICE

Field of the Invention

5 The invention relates to finger protector devices, especially (but not limited to) finger protector devices for door hinges.

Background to the Invention

10

Hinge mechanisms for doors and similar openings are generally arranged such that on opening the door a gap is formed between the internal face of the door and the adjacent door frame. On closing the door this gap is
15 inevitably reduced until the door is closed. Therefore, during closing any objects protruding into the gap are squeezed or trapped. This is a frequent cause of accidents whereby fingers are trapped between the door and adjacent door frame. Such accidents can be painful and can result
20 in serious injuries. These accidents can be especially commonplace and distressing for young children. Furthermore, the use of doors comprising automatic closing means, such as springs, can result in high closing forces.

25 It is an aim of the present invention to overcome or obviate at least one problem associated with the prior art, whether referred to herein or otherwise.

Summary of the Invention

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According to the present invention there is provided a finger protector device comprising first, second and third members, the second member being connected between the

The door frame may be connected to a first mounting portion which is pivotally connected to the first member which is pivotally connected to the second member which is pivotally connected to a third member which is pivotally connected to a second mounting portion which is connected to a door, in which the first, second and third members and the first and second mounting portions are all elongate members, and in which the finger protector device has a substantially uniform cross-section along its length.

10

Brief Description of the Drawings

The present invention will now be described by way of example only, with reference to the drawings that follow in which:

15

Figure 1 is a cross-section of a safety device for a door.

20

Figure 2 is a cross-section of a door in a closed position with a safety device attached.

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Figure 3 is a cross-section of a door in a partially open position with a safety device attached.

Figure 4 is a cross-section of a door in an open position with a safety device attached.

Description of the Preferred Embodiments

30

As shown in Figure 1, the cross-section of the safety device 10 is approximately a right angled triangle. However, prior to formation the safety device 10 is

first and third members by flexible means, the first member is arranged, in use, to be mounted to a first surface and the third member is arranged, in use, to be mounted to a second surface, in which relative movement of the first and
5 second surfaces is possible.

The flexible means may provide a pivotal connection.

The relative movement of the first and second surfaces
10 may create or close a gap between the surfaces.

The first surface may be a door. Suitably the second surface is a door frame.

15 The first, second and third members may be elongate members.

The first member may have a mounting portion connected thereto and suitably connected by flexible means. The
20 third member may have a mounting portion connected thereto and suitably connected by flexible means. The or each mounting portion or portions may be thicker than the first, second and third members. This assists in fixing the device to a door or frame. The or each mounting portion or
25 portions may be attached to a member by a flexible plastics joint which is pre-biased at about 90° relative to the member to which it or they is or are attached.

The first and second surfaces may have slots mounted
30 thereto in order to engage the mounting portions of the first and third faces respectively.

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substantially planar. The sides of the safety device 10 are formed from elongate strips of a suitable plastics material. Hinge sections 22, 24 connect the first side 16 to the second side 14 and the third side 12 to the second side 14 respectively. The hinge sections 22, 24 are formed from a flexible material. The use of flexible hinge sections reduce the opportunity of any pinching action which may result from mechanical hinge sections.

10 Connecting portions 18, 20 are provided to mount the safety device 10 to a door 30 and adjacent frame 32 or wall. The connecting portions 18, 20 are connected to the first and third sides 16, 12 by flexible hinge sections 28, 26 respectively. Connecting portions 18, 20 may be made 15 thicker than sides 12, 14, 16 to assist in mounting. To assist in mounting and in the motion of the device, the flexible joints joining connecting portions 18, 20 to sides 12, 16 respectively may be pre-biased to about 90°.

20 In order to mount the safety device 10 to a door 30 and adjacent frame 32 slots (not shown) are initially affixed to the door 30 at an inner position and to an adjacent position on the frame 32, as shown in Figure 2. The safety device 10 can then be mounted by securing the 25 connecting portions 18, 20 in the respective slots (not shown).

Alternatively, and as a preferred option with thicker connecting portions 18, 20 holes (not shown) may be 30 provided in the connecting portions to allow for screw fixing.

Once mounted the connecting portion 18 will move corresponding to the movement of the door 30 whilst the connecting portion 20 will remain affixed to the frame. The flexible hinge sections 22, 24, 26, 28 enable the safety device 10 to reconfigure according to the relative orientation of the door 30 and the frame 32. As shown in Figure 2, when the door 30 is in a closed position the safety device 10 adopts a right angle triangle cross-section. Approximations of the cross-sections of the safety device 10 with the door 30 in a partially open position and providing a 90° open position are shown in Figure 3 and Figure 4 respectively. It can be seen that at all times during the opening of the door 30 the safety device 10 prevents access to the gap formed between the inner face of the door 30 and the adjacent door frame 32. Therefore, on the subsequent closing of the door 30 there is no opportunity for objects, especially fingers, to be trapped between the door 30 and the frame 32.

The configuration of the safety device 10 also enables the safety device 10 to function during opening angles substantially greater than 90°. The configuration of the safety device 10 also enables the safety device 10 to be mounted on an adjacent frame which is not at a right angle to the door, for example a bevelled frame or a flat frame.

The reader's attention is directed to all papers and documents which are filed concurrently with or previous to this specification in connection with this application and which are open to public inspection with this specification, and the contents of all such papers and documents are incorporated herein by reference.

All of the features disclosed in this specification (including any accompanying claims, abstract and drawings), and/or all of the steps of any method or process so disclosed, may be combined in any combination, except
5 combinations where at least some of such features and/or steps are mutually exclusive.

Each feature disclosed in this specification (including any accompanying claims, abstract and drawings),
10 may be replaced by alternative features serving the same, equivalent or similar purpose, unless expressly stated otherwise. Thus, unless expressly stated otherwise, each feature disclosed is one example only of a generic series of equivalent or similar features.

15

The invention is not restricted to the details of the foregoing embodiment(s). The invention extends to any novel one, or any novel combination, of the features disclosed in this specification (including any accompanying
20 claims, abstract and drawings), or to any novel one, or any novel combination, of the steps of any method or process so disclosed.

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CLAIMS

1. A finger protector device comprising first, second and third members, the second member being connected
5 between the first and third members by flexible means, the first member is arranged, in use, to be mounted to a first surface and the third member is arranged, in use, to be mounted to a second surface, in which relative movement of the first and second surfaces is
10 possible.
2. A finger protector device according to Claim 1, in which the flexible means provides a pivotal connection.
15
3. A finger protector device according to Claim 1 or Claim 2, in which the relative movement of the first and second surfaces creates or close a gap between the surfaces.
20
4. A finger protector device according to any preceding claim, in which the first surface is a door.
5. A finger protector device according to any preceding
25 claim, in which the second surface is a door frame.
6. A finger protector device according to any preceding claim, in which the first, second and third members are elongate members.
30
7. A finger protector device according to any preceding claim, in which the first member has a mounting

portion connected thereto and is connected by flexible means.

- 5 8. A finger protector device according to any preceding claim in which the third member has a mounting portion connected thereto and is connected by flexible means.
- 10 9. A finger protector device according to Claim 7 or Claim 8, in which the or each mounting portion or portions is or are thicker than the first, second and third members.
- 15 10. A finger protector device according to Claim 7 or Claim 8, in which the or each mounting portion or portions is attached to a member by a flexible plastics joint which is pre-biased at about 90° relative to the member to which it or they is or are attached.
- 20 11. A finger protector device according to Claim 7 or Claim 8, in which the first and second surfaces may have slots mounted thereto in order to engage the mounting portions of the first and third faces respectively.
- 25 12. A finger protector device according to Claim 7 or Claim 8, in which the door frame is connected to a first mounting portion which is pivotally connected to the first member which is pivotally connected to the second member which is pivotally connected to a third member which is pivotally connected to a second mounting portion which is connected to a door, in
30 which the first, second and third members and the

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first and second mounting portions are all elongate members, and in which the finger protector device has a substantially uniform cross-section along its length.

5

13. A finger protector device substantially as described herein with reference to the drawings that follow.

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(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
15 February 2001 (15.02.2001)

PCT

(10) International Publication Number
WO 01/11176 A1

(51) International Patent Classification⁷: E06B 7/36

(21) International Application Number: PCT/GB99/02439

(22) International Filing Date: 9 August 1999 (09.08.1999)

(25) Filing Language: English

(26) Publication Language: English

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(72) Inventor; and

(75) Inventor/Applicant (for US only): **GARVEY, Frank** [GB/GB]; The Old School House, Lind Street, Off Cambrain Street, Manchester M40 7ES (GB).

(74) Agents: **BRANDON, Paul, Laurence et al.**; Appleyard Lees, 15 Clare Road, Halifax, West Yorkshire HX1 2HY (GB).

(81) Designated States (*national*): AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW.

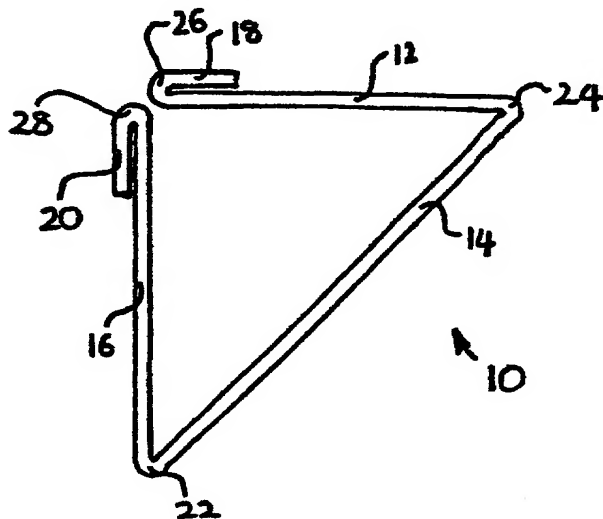
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— With international search report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: FINGER PROTECTOR DEVICE

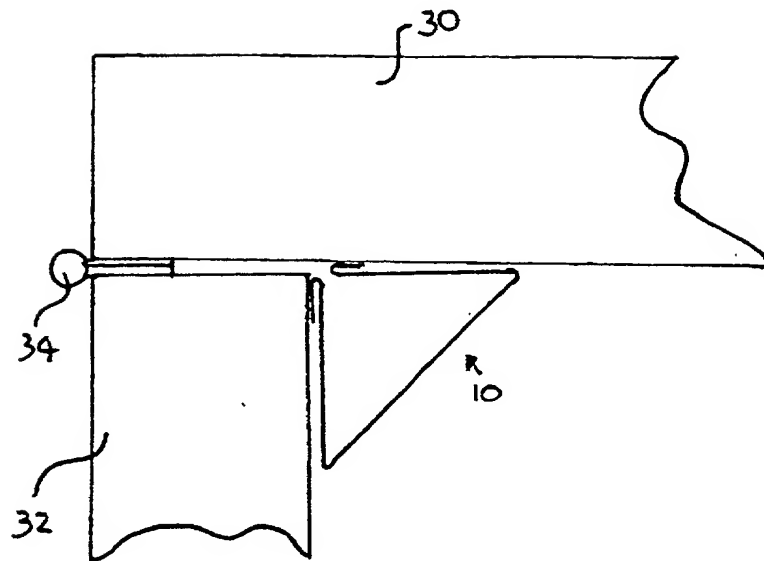
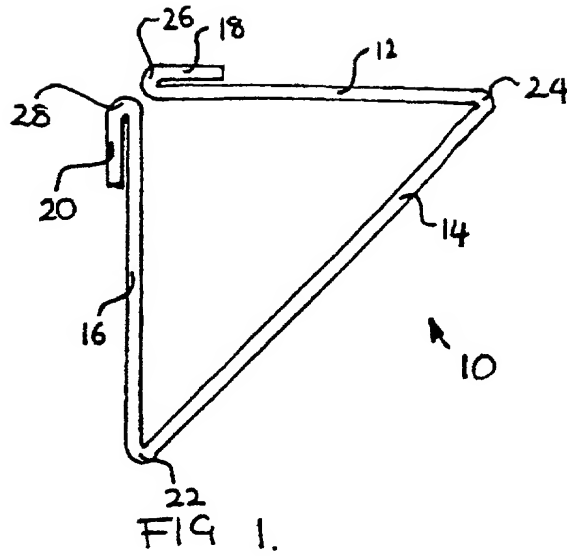


(57) Abstract: The present invention provides finger protector device comprising first (12) second (14) and third (16) members, the second member being connected between the first and third members by flexible means (22, 24), the first member is arranged, in use, to be mounted to a first surface (30) and the third member is arranged, in use, to be mounted to a second surface (32), in which relative movement of the first and second surfaces is possible.

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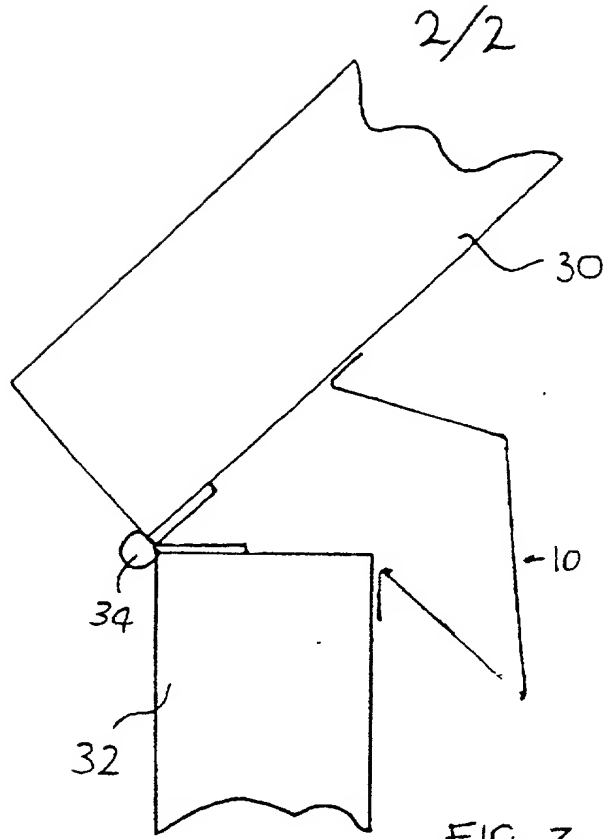


FIG 3.

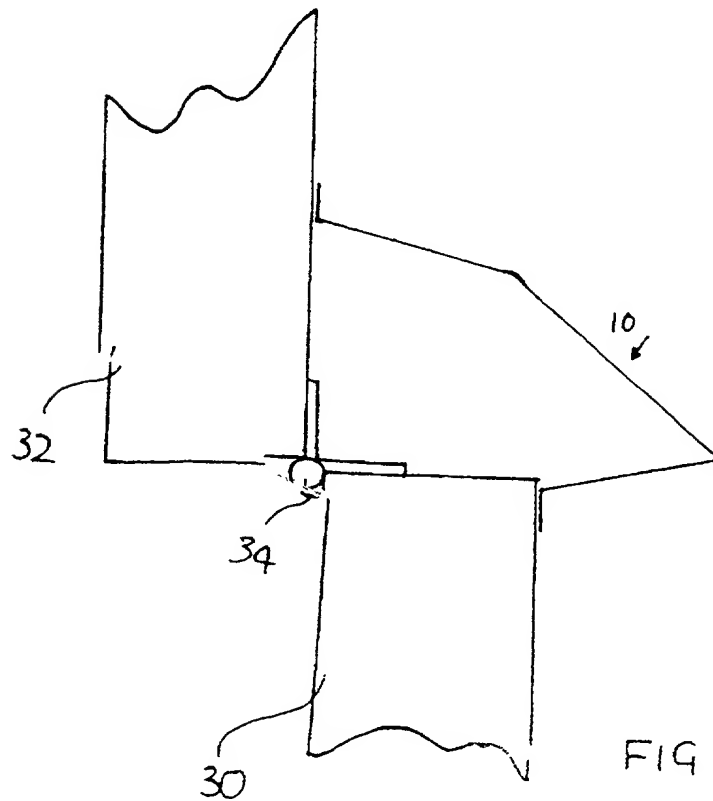


FIG 4.

**DECLARATION FOR UTILITY OR
DESIGN
PATENT APPLICATION
(37 CFR 1.63)**

☐ Declaration Submitted with Initial Filing OR ☒ Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (e)) required)

Attorney Docket Number 148/291
First Named Inventor GARVEY, Frank Joseph

COMPLETE IF KNOWN

Application Number 10/049,256
Filing Date
Art Unit
Examiner Name

As the below named inventor, I hereby declare that:

My residence, mailing address, and citizenship are as stated below next to my name.

I believe I am the original and first inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled:

FINGER PROTECTOR DEVICE

(Title of the Invention)

the specification of which

☐ is attached hereto

OR

☒ was filed on (MM/DD/YYYY) 08/09/1999 as United States Application Number or PCT International

Application Number PCT/GB99/02439 and was amended on (MM/DD/YYYY) 02/08/2002 (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:

[Page 1 of 2]

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Application Number	10/049,256
Filing Date	
First Named Inventor	GARVEY, F.
Title	FINGER PROTECTOR DEVICE
Group Art Unit	
Examiner Name	
Attorney Docket Number	148/291

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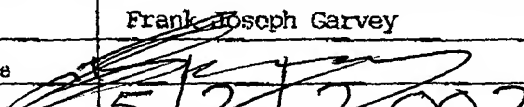
I am the:

☒ Applicant/Inventor.

☐ Assignee of record of the entire interest. See 37 CFR 3.71.

Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).

SIGNATURE of Applicant or Assignee of Record

Name	Frank Joseph Garvey
Signature	
Date	5/2/2002

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

XX Total of 1 forms are submitted.

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001; and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

NAME OF SOLE OR FIRST INVENTOR: ☐ A petition has been filed for this unsigned inventorGiven Name Frank Joseph
(first and middle (if any))Family Name Garvey
or SurnameInventor's
Signature

Date

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Manchester

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British

Residence: City

State

Country

Citizenship

Same as above

Mailing Address

City

State

ZIP

Country

NAME OF SECOND INVENTOR: ☐ A petition has been filed for this unsigned inventorGiven Name
(first and middle (if any))Family Name
or SurnameInventor's
Signature

Date

Residence: City

State

Country

Citizenship

Mailing Address

City

State

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Country

☐ Additional inventors are being named on the _____ supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto.

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